Study of Single Family Property Management Systems and Data

PROJECT PLAN

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Office of Housing

Federal Housing Administration

Department of Housing and Urban Development

Project Plan

Table of Contents

Page #

1.0 GENERAL INFORMATION 1-1
1.1 Purpose, Scope, and Objectives 1-1
1.1.1 Purpose 1-1
1.1.2 Scope 1-1
1.1.3 Objectives 1-2
1.2 System Overview 1-2
1.3 Contacts 1-4
1.4 Project References 1-4
1.5 Relationship to Other Projects 1-6
1.6 Organization Interfaces 1-7
1.7 Acronyms and Abbreviations 1-8
2.0 PLANNED ACTIVITIES 2-1
2.1 Activities 2-1
2.2 Impact to Original Schedule 2-1
2.3 Deliverables 2-1
3.0 RESOURCES 3-1
3.1 Roles and Responsibilities 3-1
3.2 Labor Categories 3-2
3.3 Budget Estimates and Total Costs 3-8
4.0 TECHNICAL APPROACH 4-1
4.1 Methods and Techniques 4-1
4.2 Environment 4-1
4.3 Analysis of Existing Systems Environment 4-1
4.4 Proposed System and Procedures 4-2

Appendices

Page #

APPENDIX A PROJECT WORKPLAN A-1

1.0 GENERAL INFORMATION

1.0 GENERAL INFORMATION

The Federal Housing Administration's (FHA's) Office of Insured Single Family Housing administers a property management program and oversees the acquisition, marketing, and disposition of approximately 60,000 properties per year. Single Family Housing maintains the Single Family Acquired Asset Management System (SAMS) and other property management support systems to assist with program operations, such as case management, financial management, contractor monitoring, business evaluation, and business partner management. SAMS and the other systems must fully support these business functions in order for FHA to effectively and efficiently manage its program.

Since the original implementation of SAMS, Single Family Housing has changed the property management program and its business model. In an effort to streamline operations, FHA began contracting out the Real Estate Owned (REO) functions in 1997. Consequently, Single Family Housing's role shifted to oversight and monitoring rather than performing the day-to-day REO activities. Over time, FHA adapted SAMS and developed supplemental systems to support both the property management and contractor oversight functions. While FHA has made extensive modifications to SAMS and developed other support systems, numerous challenges remain with its property management operations within the current systems environment. For example, maintenance costs remain excessively high. Furthermore, FHA has received criticisms from the General Accounting Office (GAO) about its Single Family property management operations, systems, and monitoring performance in various studies. As a result, GAO has placed Single Family on its high-risk list since 1994. In its financial statements, FHA also has received material weaknesses and reportable conditions related to Single Family systems, including:

- FHA's systems environment provides insufficient support to its business processes.
- FHA lacks control over budget execution and funds.
- FHA performs inadequate monitoring over its Single Family property inventory.

1.1 Purpose, Scope, and Objectives

This section describes the purpose, scope, and objectives of this project.

1.1.1 Purpose

Single Family Housing seeks to increase SAMS' functionality or implement a new system. FHA needs to assess its long-term business needs and the capacity of its current systems prior to any further systems development efforts. The *Project Plan* describes the tasks and activities necessary to complete the Department of Housing and Urban Development's (HUD) FHA Study of Single Family Property Management Systems and Data. It provides overall project activities, schedules, and resources for FHA to meet their objectives. The *Project Plan* is a dynamic document and will reflect changes in scope, schedule, and resources as the project progresses through its lifecycle.

1.1.2 Scope

This project provides FHA with a blueprint for property management and helps guide FHA towards an improved way of conducting its business. FHA performed an in-depth review of the

Single Family systems supporting the property management function, including asset management, business participant management, business evaluation, and financial management. Based on this analysis, we presented an alternative solution to its current systems environment. FHA conducted this study in five primary phases:

- Phase I – Identify major business and system needs.
- Phase II – Identify major deficiencies in the current systems.
- Phase III – Develop short- and long-term alternatives.
- Phase IV – Present findings and obtain stakeholder buy-in.
- Phase V – Develop Initiate phase documents, including the Project Plan, Needs Assessment, Feasibility Study, Risk Analysis, Cost-Benefit Analysis, System Security Plan, and Systems Decision Paper.

1.1.3 Objectives

The objective of this study is to determine the best alternative for FHA's property management systems, particularly SAMS and the related support systems. FHA completed a *Business Needs* and *Current Deficiencies* reports to help determine their current and future operating environment. Based on these reports, FHA plans to identify improvements to:

- Capture and access property and monitoring data that is comprehensive, accurate, and timely.
- Strengthen contractor oversight and assessment capabilities.
- Improve funds control, payables management, receivables management, and other accounting functions.
- Strengthen reconciliation processes and reduce manual reconciliations.
- Enhance ad hoc query capabilities thereby improving timeliness of reporting.
- Make the system more accessible to stakeholders through the use of the Internet.
- Streamline and integrate business processes so that valuable personnel time can be allocated to business operations rather than data management.
- Realize faster reviews and achieve time-savings through business partner communications and decision-making occurring within the system.
- Reduce manual and paper-driven processes.

1.2 System Overview

While the HUD's Information Technology (IT) division provides technical assistance, HUD's Office of Housing is responsible for the identification of business process and reporting needs of its systems. For Single Family mortgage insurance programs, the Office of Single Family Programs and the Office of the Comptroller share responsibility for SAMS and other Single Family systems.

SAMS is a mixed program and financial management system that accounts for the sale of over 60,000 properties per year valued at over $5 billion dollars with related expenses totaling nearly $1 billion. SAMS supports HUD staff at Headquarters, Homeownership Centers (HOCs), and

Management and Marketing (M&M) contractors with tracking Single Family properties from acquisition through resale. In addition to collecting data related to the management, marketing, and disposition of properties, SAMS maintains financial records in compliance with the Federal Credit Reform Act and processes disbursements to M&M contractors, vendors, taxing authorities, and homeowners' associations.

SAMS is hosted on HUD's IBM-compatible mainframe and is connected to HUD's network, HINET, through a COMTEN front-end processor. Software used in SAMS includes: COBOL, DB2, CICS, EXTRA, JCL, NOMAD, and the Configuration Management tool, Endevor. SAMS development tools include Electronic Data System's (EDS) proprietary case tool – INCASE.

The following table provides the requisite system information.

Responsible Organization	Federal Housing Administration – Office of Housing
System Name or Title	Single Family Acquired Asset Management System
System Code	A80S
Project Cost Accounting Sub-system (PCAS) Number	To Be Determined
System Category	Major application
Operational Status	Operational
Users	FHA and M&M contractors
System Input	Mortgagee data, transmittal check data, property acquisition data, claim data, lockbox and Fedwire collection data, check data, valid property case data, property maintenance data, property acquisitions
System Output	New acquisitions, inventory status and sales data, property listing, property title data, SAMS general ledger balances, disbursement data, and sales related data.
Interaction With Other Systems	The SAMS environment is composed of numerous interconnected and stand alone systems. SAMS shares data with the following systems through manual or automated interfaces: Single Family Insurance System (SFIS), Computerized Homes Underwriting Management System (CHUMS), Institutional Master File (IMF), A80N, Single Family Insurance Claims Subsystem, Lockbox, File Transfer Protocol (FTP) Server, HUD Web, Kiosks, Single Family Data Warehouse (SFDW), TEAM, Fedwire system (Cashlink), Cash Control Accounting Reporting System (CCARS), ECS system (Electronic Funds Transfer (EFT) disbursements), and the

	FHA Subsidiary Ledger

1.3 Contacts

This table provides a list of organizational points of contact that may be needed by the document user for informational and troubleshooting purposes. All contacts are located at 451 Seventh Street, SW, Washington, DC, 20410.

Type of Contact	Contact Name	Department	Telephone	Email/Address

1.4 Project References

FHA used the following reference materials to prepare this *Project Plan*.

Document	Date
EDS, HUD/SAMS Release Summary	No date noted
Information Technology Reform Act of 1996	No date noted
IBM Endowment for the Business of Government, *IT Outsourcing: A Primer for Public Managers*, Chen, Perry	February 2003
Joint Financial Management Improvement Program, *Property Management System Requirements*	October 2002
Management & Marketing Service Contract Terms and Conditions	No date noted
National Institute of Standards and Technology, *Special Publication 800-12, An Introduction to Computer Security: The NIST Handbook*	October 1995

Document	Date
National Institute of Standards and Technology, *Special Publication 800-14, Generally Accepted Principles and Practices for Securing Information Technology Systems*	September 1996
National Institute of Standards and Technology, *Special Publication 800-16, Information Technology Security Training Requirements: A Role- and Performance-Based Model*	April 1998
National Institute of Standards and Technology, *Special Publication 800-18, Guide for Developing Security Plans for Information Technology Systems*	December 1998
National Institute of Standards and Technology, *Special Publication 800-26, Security Self-Assessment Guide for Information Technology Systems*	November 2001
National Institute of Standards and Technology, *Special Publication 800-40, Procedures for Handling Security Patches*	August 2002
National Institute of Standards and Technology, *Special Publication 800-44, Guidelines on Securing Public Web Servers*	September 2002
Office of Management and Budget Circular Number A-130, *Management of Federal Information Resources, Appendix III*	November 2000
United States Department of Housing and Urban Development, *Business Process Reengineering*	March 1997
United States Department of Housing and Urban Development, *FHA Audit of Financial Statements Fiscal Years 2002 and 2001*	January 2003
United States Department of Housing and Urban Development, *Final Draft SAMS User's Guide*	August 2002
United States Department of Housing and Urban Development, *Management Structure Design and Specifications in the M&M Contract Environment For Single Family Property Disposition*	January 1999
United States Department of Housing and Urban Development, *M&M Contractor Compliance Review, Risk-Based Targeting Model Web Tool Training*	August 2002
United States Department of Housing and Urban Development, *Office of the Single Family Housing Target Architecture Development*	September 2002

Document	Date
United States Department of Housing and Urban Development, *Processing Procedures and Internal Controls for M&M Contractors*	No date noted
United States Department of Housing and Urban Development, *SAMS Reports Training Manual*	May 2002
United States Department of Housing and Urban Development, *Single Family Housing Target Architecture*	August 2002
United States General Accounting Office, *Financial Management: Strategies to Address Improper Payments at HUD, Education, and Other Federal Agencies*	October 2002
United States General Accounting Office, *Information Technology Leading Commercial Practices for Outsourcing of Services*	November 2001
United States General Accounting Office, Loan Origination and Foreclosed Property Management Processes	November 1999
United States General Accounting Office, *Single Family Housing: Current Information Systems Do Not Fully Support the Business Processes at HUD's Homeownership Centers*	October 2001
United States General Accounting Office, *Single Family Housing: Improvements Needed in HUD's Oversight of the Property Sale Process*	April 2002
United States General Accounting Office, *Single Family Housing: Stronger Measures Needed to Encourage Better Performance by Management and Marketing Contractors*	May 2002

1.5 Relationship to Other Projects

In October of 2002, FHA implemented the General Ledger module of PeopleSoft Financials version 7.5 to act as FHA's subsidiary ledger. Future plans involve phasing in the Budget, Payables, and Receivables modules, and upgrading to the web-enabled version 8.0. The proposed property management system must leverage the functionality of the PeopleSoft Subsidiary Ledger application to perform financial management functions. Furthermore, FHA is currently redesigning processes and systems surrounding funds control and cash management. FHA must coordinate the impacts and dependencies with both of these efforts.

Single Family began developing its target architecture in conjunction with an ongoing effort by HUD's Office of the Chief Information Officer to implement a Department-wide enterprise architecture. HUD plans to significantly reduce the number of systems directly supporting Single Family's daily business activity through the design of the Target Architecture because it

minimizes functional overlap, improves data quality, and increases flexibility. The Target Architecture also identifies opportunities to leverage systems that cut across Single Family and/or the entire Department. FHA must coordinate this effort within the framework of the Target Architecture and plan for a unified Single Family systems environment. Furthermore, this approach will help FHA to create a vision of Single Family mortgage insurance operations that more readily shares and leverages information across processes.

The proposed system may also exchange data with a number of other systems, such as the SFDW, SFIS, and Single Family Insurance Claims Subsystem. FHA must coordinate impacts and dependencies with each of these systems.

1.6 Organization Interfaces

During this effort, FHA will work with several HUD organizations.

- Office of Administration (OA) – FHA will work with the OA throughout the project.
- Office of the Chief Financial Officer (OCFO) – FHA will work with the OCFO to identify HUD financial management requirements, standards, and related business processes.
- Office of Chief Information Officer (OCIO) – FHA will work with the OCIO to take part in the Technical Investment Board (TIB) proceedings, ensure involvement in the development of the HUD Enterprise Architecture, and participate in the departmental Data Quality initiative.
- OCPO – FHA will work with the OCPO to execute procurement actions, manage contractual relationships, and resolve contract issues.
- Office of Inspector General (OIG) – FHA will work with the OIG to review compliance with departmental guidelines and federal regulations.
- Office of Information Technology (OIT) – FHA will work with OIT to determine and prioritize the technical requirements for the new system, and to coordinate the installation, maintenance, and operation of the technical environment. The FHA team will work with the quality assurance division personnel to ensure the initiative aligns with HUD's system integrity policies.

The following table provides a list of organizations that require coordination between the project and its specific support function.

Type of Contact	Contact Name	Department	Telephone	Email/Address

Type of Contact	Contact Name	Department	Telephone	Email/Address

1.7 Acronyms and Abbreviations

The following table lists the acronyms and abbreviations used in this document.

Acronym/Abbreviation	Definition
ADP	Automatic Data Processing
ASP	Application Service Provider
CCARS	Cash Control Accounting Reporting System
CHUMS	Computerized Homes Underwriting System
CIO	Chief Information Officer
CO	Contracting Officer
EDS	Electronic Data Systems
EFT	Electronic Funds Transfer
FHA	Federal Housing Administration
FTP	File Transfer Protocol
GAO	General Accounting Office
GTM	Government Technical Monitor
GTR	Government Technical Representative

Acronym/Abbreviation	Definition
GUI	Graphical User Interface
HOC	Homeownership Center
HUD	U.S. Department of Housing and Urban Development
IMF	Institutional Master File
IT	Information Technology
ITAS	Inspection Tracking and Assessment System
M&M	Management and Marketing
OA	Office of Administration
OCFO	Office of the Chief Financial Officer
OCIO	Office of the Chief Information Officer
OCPO	Office of the Chief Procurement Officer
OIG	Office of Inspector General
OIT	Office of Information Technology
PCAS	Project Cost Accounting Sub-System
REO	Real Estate Owned
RBTM	Risk Based Targeting Model
SAMS	Single Family Acquired Asset Management System
SDM	System Development Methodology
SFDW	Single Family Data Warehouse
SFIS	Single Family Insurance System
TIB	Technology Investment Board

2.0 PLANNED ACTIVITIES AND DELIVERABLES

2.0 PLANNED ACTIVITIES

The *Project Plan* identifies accomplished activities and events for the Initiate phase of HUD's System Development Methodology (SDM). It will be updated to reflect planned activities in future phases as needed.

2.1 Activities

FHA performed an in-depth review of the Single Family systems supporting the property management function in accordance with HUD's SDM. As part of this methodology, FHA identified major business and system needs as well as deficiencies in the current systems. FHA performed an assessment of alternatives and developed the documentation associated with the Initiate phase of HUD's SDM. These documents include the *Needs Statement, Feasibility Study, Risk Analysis, Cost/Benefit Analysis,* and *Systems Decision Paper*.

Through these analyses, FHA presents an alternative solution to its current systems environment – use an Application Service Provider (ASP) for Single Family property management business functions and leverage FHA's Subsidiary Ledger for financial management functions. This solution enhances FHA's ability to perform program responsibilities while reducing annual system maintenance costs.

FHA followed a detailed project workplan in completing activities during the Initiate phase. The FHA team developed the project workplan in accordance with the HUD standard SDM. Refer to Appendix A for the detailed project workplan. The team will review and update this report at the beginning and end of each SDM phase throughout the project lifecycle. This report will serve both as a management review tool and as a problem mitigation tool for current as well as future projects.

2.2 Impact to Original Schedule

The FHA Office of Insured Single Family Housing must approve changes to the project workplan. The *Project Plan* documents the justification for any major schedule slippage that is greater than 15 percent (based on the original estimate of completion dates) and describes any actions taken to prevent recurrence.

There were no major schedule slippages during the Initiate phase.

2.3 Deliverables

The planned activities for each project phase must include delivery of the SDM documents. The GTM and project manager identify the SDM deliverables associated with each phase. FHA re-evaluates and updates the project schedule at the end of each SDM phase.

During the Initiate phase, FHA completed the *Business Needs, Current Deficiencies,* and *Alternatives Assessment* reports as well as the *Needs Statement, Feasibility Study, Risk Analysis, Cost/Benefit Analysis, System Security and Privacy Plan, and System Decision Paper*. Refer to Appendix A for the project workplan that contains time spans for the project activities and dates for project deliverables associated with this phase of the project. FHA continually

updated this work plan to reflect the current project status. FHA will continue to update and re-evaluate this schedule throughout the project lifecycle.

3.0 RESOURCES

3.0 RESOURCES

This project has multiple phases. It requires coordination from the staff and contractors who support Single Family's property disposition program and other HUD organizations that manage the agency's information technology infrastructure. The resource requirements depend on actual system implementation needs and the availability of the resources at different stages of the lifecycle.

3.1 Roles and Responsibilities

The following table summarizes the roles and responsibilities for each key member of the Initiate phase.

Project Team Member	Role	Responsibilities
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3.2 Labor Categories

FHA expects to have a project team comprised of several smaller project area teams. The project area teams, as well as detailed roles, responsibilities, and representative work products for the project area team members are presented in the following table. FHA will determine the number of resources required per project area team as the project progresses. The number of resources required for each role is dependent on the project lifecycle phase. In future phases, FHA will assign labor categories to contractor staff as part of contract negotiations.

Project Team Area	Role	Responsibilities	Representative Work Products
Project Management	▪ Provide leadership, guidance and direction for the Project Team. ▪ Monitor and report project progress to FHA Management and Stakeholders. ▪ Identify and mitigate project risks. ▪ Facilitate communication among project team members from different teams and organizations.	▪ Define scope, objectives, approach and organization. ▪ Define roles and responsibilities. ▪ Define resources. ▪ Establish /maintain work plans. ▪ Define implementation approach.	▪ Updated project plan. ▪ Project scope, objectives, and approach. ▪ Project team organization with responsibilities. ▪ Implementation strategy.
QA/Program Office Support	▪ Support the project management team. ▪ Monitor compliance with HUD SDM and other departmental requirements. ▪ Monitor compliance with external entity requirements (i.e., OMB, GAO, etc.). ▪ Prepare documentation for procurements.	▪ Provide quality assurance guidance to project team members. ▪ Prepare status reports. ▪ Record and monitor issues. ▪ Define documentation templates.	▪ Status reports. ▪ Issue tracking reports. ▪ Risk management strategy.

Project Team Area	Role	Responsibilities	Representative Work Products
Functional - Business Process, Documentation	▪ Provide subject matter expertise on current business processes and supporting technical/systems environment. ▪ Define target or "to-be" environment. ▪ Determine process and procedural changes required to align with new property management system.	▪ Confirm current business processes. ▪ Develop "to-be" process. ▪ Define management reports. ▪ Assess gaps between business processes and systems. ▪ Conduct business modeling workshops. ▪ Define and develop standards and procedures. ▪ Develop system documentation. ▪ Work with technical teams to define control tables, configuration, options, interfaces, conversion, and reporting requirements.	▪ Input/output boundary diagram. ▪ High-level documentation of current processes, systems. ▪ Conceptual design for target environment. ▪ Gap assessment and recommendations. ▪ Process overview. ▪ Procedures for target environment.

Project Team Area	Role	Responsibilities	Representative Work Products
Stakeholder & End User Communication Management	▪ Design and execute the organizational change and communications needed to support the new property management system. ▪ Support project management team.	▪ Understand stakeholder concerns. ▪ Assess organizational readiness for change. ▪ Align organization with future environment. ▪ Develop communication strategy and plan. ▪ Implement and monitor communications. ▪ Help management prepare the organization for new system and processes.	▪ Communication strategy and plan. ▪ Project web page.
Training	▪ Design and execute the training needed to support the new property management system.	▪ Develop training strategy. ▪ Create/customize end-user training. ▪ Assess skills. ▪ Develop training plan for team and end users. ▪ Develop training documentation. ▪ Deliver end-user training.	▪ Training plan. ▪ Training materials. ▪ Training.
Security Administration	▪ Design and configure the software package to meet FHA's security requirements.	▪ Conduct risk assessment and define systems risk management procedure. ▪ Design security configuration. ▪ Perform periodic risk assessment. ▪ Define and implement system security plan.	▪ System security plan. ▪ Security configuration design documents. ▪ Risk assessment.

Project Team Area	Role	Responsibilities	Representative Work Products
Conversion and Interfaces	▪ Design and develop conversion and interface programs.	▪ Analyze requirements. ▪ Design programs. ▪ Develop programs.	▪ Interface inventory. ▪ Data conversion strategy. ▪ Design documents. ▪ Conversion and interface programs.
Hardware/Software Infrastructure	▪ Design, implement, and maintain technical infrastructure. ▪ Perform database administration. ▪ Perform operating system administration.	▪ Assess current technical infrastructure. ▪ Design and develop architecture. ▪ Build and test servers, circuits, and security components. ▪ Tune technical infrastructure and system. ▪ Conduct performance benchmarking and software configuration. ▪ Prepare an architecture assessment and technical fit analysis reports. ▪ Establish and maintain fit environments.	▪ Target technical architecture workbook.
Application Management	▪ Design and configure the software package to meet FHA requirements.	▪ Analyze fit/gap.	▪ High-level fit/gap analysis with alternatives and recommendations.

Project Team Area	Role	Responsibilities	Representative Work Products
Application Administration	▪ Configure system options.	▪ Configure software. ▪ Define application administration processes and procedures. ▪ Configure system administrative features. ▪ Apply patches and fixes.	▪ Configuration design documents.
Reporting	▪ Design and develop reporting programs.	▪ Analyze requirements. ▪ Design reports. ▪ Develop programs.	▪ Design documents. ▪ Reports.
Testing	▪ Design and execute system testing. ▪ Design and execute string testing. ▪ Design and execute integration testing. ▪ Design and execute user acceptance testing.	▪ Develop system test strategy. ▪ Develop system test plan. ▪ Execute system testing.	▪ System test results. ▪ User acceptance test sign-off.

3.3 Budget Estimates and Total Costs

The cost of the Initiate phase was approximately $500,000, which includes an alternatives assessment and the majority of the Initiate phase SDM documents. Exhibit 3-1 below presents the summarized costs for replacing SAMS with an ASP solution from the Define to Operate phases of the lifecycle. The total cost for this solution is estimated to be approximately $28.4 million. In current dollars, the cost is approximately $25.8 million.

Exhibit 3-1 ASP Summary

Investment Costs

Activity	FY2004	FY2005	FY2006	FY2007	FY2008	5 Year Total	NPV
Software	$ 437,500	$ -	$ -	$ -	$ -	$ 437,500	$ 416,476
Hardware	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000	$ 237,986
Configuration	$ 1,312,500	$ -	$ -	$ -	$ -	$ 1,312,500	$ 1,249,429
Customization	$ 437,500	$ -	$ -	$ -	$ -	$ 437,500	$ 416,476
Interfaces	$ 3,375,000	$ -	$ -	$ -	$ -	$ 3,375,000	$ 3,212,817
Testing	$ 375,000	$ -	$ -	$ -	$ -	$ 375,000	$ 356,980
Data Conversion	$ 750,000	$ -	$ -	$ -	$ -	$ 750,000	$ 713,959
BPR	$ 937,500	$ -	$ -	$ -	$ -	$ 937,500	$ 892,449
Training	$ 350,000	$ -	$ -	$ -	$ -	$ 350,000	$ 333,181
Change Management	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000	$ 190,389
Project Management	$ 400,000	$ -	$ -	$ -	$ -	$ 400,000	$ 380,778
Implementation IV&V	$ 350,000	$ -	$ -	$ -	$ -	$ 350,000	$ 333,181
Investment Cost Total	**$ 9,175,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 9,175,000**	**$ 8,734,103**

Recurring Costs

Activity	FY2004	FY2005	FY2006	FY2007	FY2008	5 Year Total	NPV
Software Maintenance/Upgrades	$ -	$ 125,000	$ 127,900	$ 130,857	$ 133,903	$ 517,671	$ 435,754
System Operations & Upgrades	$ -	$ 1,500,000	$ 1,534,800	$ 1,570,407	$ 1,606,841	$ 6,212,048	$ 5,229,049
Hardware & Communications	$ 15,625	$ 62,500	$ 63,950	$ 65,434	$ 66,952	$ 274,460	$ 232,751
Ongoing IV&V for Upgrades	$ -	$ 62,500	$ 63,950	$ 65,434	$ 66,952	$ 258,835	$ 217,877
FHA Functional Users	$ 915,915	$ 937,164	$ 958,907	$ 981,153	$ 1,003,916	$ 4,797,055	$ 4,138,887
Help Desk	$ -	$ 87,500	$ 89,530	$ 91,607	$ 93,732	$ 362,369	$ 305,028
Recurring Cost Total	**$ 931,540**	**$ 2,774,664**	**$ 2,839,037**	**$ 2,904,902**	**$ 2,972,296**	**$ 12,422,439**	**$ 10,559,346**

Phase-Out Costs

Activity	FY2004	FY2005	FY2006	FY2007	FY2008	5 Year Total	NPV
Legacy System Phase Out	$ 6,827,403	$ -	$ -	$ -	$ -	$ 6,827,403	$ 6,499,318
Phase-Out Cost Total	**$ 6,827,403**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 6,827,403**	**$ 6,499,318**

	FY2004	FY2005	FY2006	FY2007	FY2008	5 Year Total	NPV
GRAND TOTAL	**$ 16,933,943**	**$ 2,774,664**	**$ 2,839,037**	**$ 2,904,902**	**$ 2,972,296**	**$ 28,424,842**	**$ 25,792,766**

4.0 TECHNICAL APPROACH

4.0 TECHNICAL APPROACH

This section describes what methods and techniques will be used in this project. It also documents FHA's analysis of its existing systems environment as well as the proposed future environment.

4.1 Methods and Techniques

This project will follow the life cycle phases specified in HUD's SDM. The GTM and project manager will identify the activities associated with each phase. Additional methods and techniques will be developed as the project progresses.

Throughout the lifecycle, FHA will need to update the Initiate phase documents. Given that FHA plans to implement an ASP solution, FHA needs to continue to address the potential security issues associated with this type of solution.

4.2 Environment

At this time, there are no specified changes to the technical environment. However, FHA will require additional equipment and support software to meet the information technology needs of any new property management implementation project. FHA will work with the OCIO, OIT, OCPO, and the ASP to assess compatibility with existing and future architectural considerations and to execute any necessary procurement actions.

4.3 Analysis of Existing Systems Environment

Since the original implementation of SAMS, Single Family Housing has changed the property management program and its business model. In an effort to streamline operations, FHA began contracting out the REO functions in 1997. Consequently, Single Family Housing's role shifted to oversight and monitoring rather than performing the day-to-day REO activities. Over time, FHA adapted SAMS and developed supplemental systems to support both the property management and contractor oversight functions. FHA and its contractors rely on:

- SAMS to track and account for acquired properties.
- A geo-mapping tool to identify property locations.
- M&M FTP server and the SFDW to provide data and ad hoc reports.
- Neighborhood Watch, Inspection Tracking and Assessment System (ITAS), and the Risk-Based Targeting Model (RBTM) to support monitoring efforts.
- Officer Next Door/Teacher Next Door and the Asset Control Area systems to support new program requirements.
- Nonprofit Approval system to track nonprofits authorized to participate in Single Family programs.
- Single Family Default Monitoring System to monitor defaults.
- Numerous other cuff systems internal and external to HUD for property management activities.

While FHA has made extensive modifications to SAMS and developed other support systems to perform its responsibilities for property management, numerous business needs remain unmet by this network of systems. FHA has received criticisms from GAO about its Single Family property management operations, systems, and monitoring performance in various studies. As a result, GAO has placed Single Family on its high-risk list since 1994. In its financial statements, FHA also has received material weaknesses and reportable conditions related to Single Family systems:

- FHA's systems environment provides insufficient support to its business processes.
- FHA lacks control over budget execution and funds.
- FHA performs inadequate monitoring over its Single Family property inventory.

Furthermore, the maintenance costs are high because SAMS and related systems use old technology and modifications demand careful and extensive analysis to identify the exact code requiring changes. FHA has completed a detailed analysis of the deficiencies of the current systems environment. For a complete list of deficiencies, refer to FHA's *Current Deficiencies* report.

4.4 Proposed System and Procedures

In the proposed solution, an ASP will host the property management application on its own servers within its own facilities. The ASP not only hosts the application, but will provide full-scale services for implementation, training, and ongoing operational support. The service provider will shoulder the burden of database and programming administration, backup processing, and core hardware acquisition, support, and maintenance. The ASP will provide FHA with the required hardware platform and infrastructure support, eliminating the time required for hardware procurement and installation. The ASP solution will reside external to a client's technical environment so it will not impact the development of HUD's enterprise architecture. The ASP solution will allow FHA to obtain the functionalities of a new property management system while HUD continues to develop its enterprise architecture.

The proposed solution will be a web-based system with property management and REO functionalities. It will have a comprehensive workflow engine that will assign work based on predetermined events. The combination of the web and the workflow engine will make the system easily accessible to stakeholders and streamline business processes. The system will have an easy to navigate Graphical User Interface (GUI). The GUI will give users easy access to case level pertinent property information and will improve screen flow. The solution will also provide support for electronically imaged documents, incorporate comprehensive communication tools for Single Family and its business partners, and provide a new user-friendly reporting tool.

The solution will improve monitoring activities by incorporating the functionalities of the RBTM and ITAS to provide a central location to sample, assign, and review case files. The property management system will also provide quantifiable measurements of M&M contractor and vendor performance for all areas of service and will have analytical tools available to conduct statistical analyses of portfolio data.

The property management system will interface with the FHA Subsidiary Ledger, which will support financial management activities. The property management system will store

operational data, and the Subsidiary Ledger will store the necessary financial data. An interface between the property management system and the Subsidiary Ledger will facilitate the exchange of financial information at predetermined events or on predetermined timeframes. The Subsidiary Ledger will use the financial information to post journal vouchers, track contract spending, and perform funds control. The Subsidiary Ledger will send funds control approvals/rejections, transmittal check data, lockbox, and Fedwire collection data to the property management system. There is a wide range of interface options available to FHA, and more information will be available as the interface is defined in greater detail.

APPENDIX A WORKPLAN